

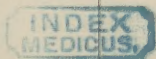
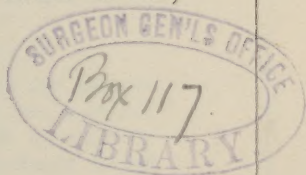
LUNDY (C. J.)

SYMPATHETIC
AFFECTIONS OF THE EYE,

BY

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SYMPATHETIC AFFECTIONS OF THE EYE, WITH NOTES OF CASES.

Sympathetic troubles of the eye have received much attention from the specialist, although the *modus operandi* by which the sympathetic mischief is produced is still shrouded in mystery. The sympathetic affection may occur in the form of simple irritation, or it may assume the form of an inflammation which will prove destructive to the eye.

It would seem that this sympathetic disturbance must be conveyed through the medium of the ciliary nerves and the sympathetic to the sound eye, but the most careful search has failed to discover its course. Neurotomy optico-ciliaris, as well as enucleation, has checked this mischief when it has not reached the stage of actual inflammation. If, however, inflammation has actually arisen, these operations are usually of little avail in checking the destructive process.

Injuries to the eye which involve the ciliary region are liable to produce sympathetic ophthalmia in the fellow eye. This may be slow and unattended by acute symptoms, or

it may assume a violent form from the start. The sympathetic ophthalmia, while it usually begins as a cyclitis, or iridocyclitis, may appear as a choroiditis, choroido-retinitis, neuro-retinitis, or as an iritis. However, it is to the so-called sympathetic irritation that I wish to confine my remarks in this short paper. Many cases (a minority, indeed) of sympathetic ophthalmia originate from those in which for a longer or shorter period there was only a condition of irritation.

Now, what constitutes the *tout ensemble* of sympathetic irritation? Given, an inflammation or injury involving the ciliary region of an eye, there may arise in the fellow-eye a train of symptoms which are dependent upon the condition present in the inflamed or injured eye, and which are influenced by every change in the condition of the latter. These symptoms are evidently neural in character, for the most careful observation fails to reveal any pathological changes in an eye so irritated. If pathological changes have taken place as the result of sympathetic disturbance, they may be considered as the result of inflammation rather than as the result of simple irritation.

Although comparatively few cases of sympathetic irritation terminate in sympathetic ophthalmia, owing in part, no doubt, to operative interference, yet it will be impossible to say when a given case may so terminate, and it is this fact which gives to the former class of cases such great importance. I was recently consulted by a lady from London, Ont., in regard to an eye trouble of long standing. One eye was totally blind and atrophied as the result of an injury, while in

the other eye there was only perception of light. In the latter she had suffered for many years from sympathetic irritation without impairment of vision, but finally vision began to fail and went on from bad to worse, although there had not been any marked or noticeable exacerbation of the sympathetic disturbance.

The following brief notes of cases will help to illustrate the general course of sympathetic disturbances of the eye:

Case 1. Mrs. W., æt. 22, resides near Adrian, and came to consult me some months ago regarding a trouble of her eyes. When a child of four years she received an injury in the left eye from the tines of a fork. The wound was in the ciliary region, but did not cause any serious trouble for a time. Later the eye became painful and inflamed, and vision began to fail. This condition continuing, it was noticed that a slight bulging began to make its appearance at the site of the former injury. This bulging, or staphyloma, gradually increased till it involved nearly the whole of the sclero-corneal junction. The long-continued inflammation caused a thinning of the tunics in this region, and the ball yielded to the intra-ocular pressure at this the point of least resistance. The eye presented an unsightly appearance, and had protruded between the lids to such an extent that they had not been closed for eleven years. For two years or more there had existed sympathetic irritation in the right eye, but for six months previous to consultation this had been of an aggravated character. The sympathetic trouble consisted of photophobia, lachrymation, blurring of vision, flashes of light, ina-

bility to use the eye for near work longer than a few minutes at a time, and occasional pain. For seventeen years pain had seldom been absent from the injured eye, and her health was impaired in consequence; the eye was unsightly, and lastly and most important, the usefulness of the fellow eye was much impaired and its safety threatened; hence there was but one course to pursue in this case, and that was enucleation. This I performed in the usual manner, and, although the sympathetic disturbance was markedly relieved, yet there was for a time an occasional reminder of the former disagreeable symptoms.

Case 2.* Miss T. L., of near Chatham, Ont., came to consult me several months ago, regarding a sympathetic trouble of her eye. As the result of an ulcer of the cornea there had been perforation of the same and prolapse of iris. This was followed by a chronic irido-cyclitis. From time to time there were exacerbations of pain and inflammation in this eye, and at such times there was more or less irritation of its fellow. These attacks of sympathetic trouble increased in frequency and severity and finally became pretty general. I advised either enucleation or section of the ciliary nerves (neurotomy optico-ciliaris), and she chose the latter operation. This was, I believe, the first instance in which the new operation had been performed in this part of the country, and it was accomplished successfully, as follows: The patient being under chloroform, a stop speculum was introduced, and an incision was made through the conjunctiva and subconjunctival tissue one

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eighth of an inch, from the sclero-corneal junction and over the insertion of the internal rectus muscle. With a strabismus hook the muscle was caught up and a silk thread was passed through it in order to keep the muscle within easy reach after its division. The tendon was now divided within a line of its ocular attachment, and the conjunctiva was freely dissected up with the scissors. The ocular end of the tendon was then seized with a forceps in the hands of an assistant, and the eye-ball was rotated forcibly outward toward the temple, by which means the posterior pole of the eye was brought well toward the nasal side. A long, well-curved enucleation scissors was then introduced close to the eye-ball, and carried round to its posterior pole, and the optic nerve and ciliary nerves and vessels, which enter the eye at the back, were entirely and completely severed. Immediately after section of the nerves and blood vessels, the eye bulged forward nearly out of the orbit, and a free escape of blood followed the withdrawal of the scissors.

The eye was now turned back in place, as well as possible, and the cut ends of the internal rectus tendon were stitched firmly together, a bandage applied and frequent applications of cold water were ordered. Patient had considerable pain, for which morphine was given as required. On the fourth day the sympathetic trouble of the right eye had disappeared. By the seventh day the chemosis and swelling had much abated, and motions of the ball were tolerably good. In four to five weeks the eye looked as well as before the operation, was no longer painful, and its motions were perfect. So long as the patient

was under observation there was no return of the sympathetic disturbance, and neither was there any when I heard from her some months later.

Case 3. Mrs. S., a resident of —, contracted syphilis from her husband in the spring or early summer of '78, and in January, '79, she came under my care for secondary troubles (iritis, etc.). She returned home, well to all appearances, although the syphilitic poison was still latent in the system, and of this she was fully warned. In February, 1880, or about thirteen months later, she returned to consult me again. She was suffering from well marked tertiary symptoms (periostitis of the foot, hand, etc.) and one eye was hopelessly blind. The ball was atrophied and soft, (tension — 3) there was great tenderness in the ciliary region, the pupil was completely adherent to the lens capsule (annular synechia), and it (the pupil) was filled with an organized inflammatory exudate. For months she had suffered severe pain in the eye, but for some time previous to consultation it was less painful. There was an irido-choroiditis with cyclitis, in other words, an inflammation of the whole uveal tract.

For some time previous to consultation she had been suffering from sympathetic irritation of the other eye, and the question of enucleating the diseased eye or of severing its ciliary nerves was carefully considered. For various reasons the latter was not deemed a safe operation in such a subject; and, although enucleation was indicated, yet her pitiable condition (she was a mere wreck from long suffering and the constitutional disorder) would not warrant even enucleation. I ordered tonics,

a pancreatic emulsion of cod-liver oil, iodine with iodide of potassium, and directed that all possible attention be given to improving the general condition. I advised that no operation be made at the time, or until the general health improved, provided the sympathetic symptoms did not assume a more dangerous character. Some time later I learned that neither had my prescriptions been taken nor my injunction been followed, and that her family physician had enucleated the eye about one week after I saw her. I also learned from the same source (the lady's brother who came to consult me on her behalf) that from the orbit, which presented a fungoid appearance, there was oozing a foul, stinking, purulent discharge, and that little hope was entertained of her recovery. Her physician desired to amputate the leg and also a portion of the hand, although the patient was too feeble to leave the bed, and in the interest of humanity I told the lady's brother that it were better to amputate "below the ears," and that instead of taking "arms against a sea of troubles" she might by amputation "end them."

Case 4.* Miss A. K., æt 34, resident of Detroit, had small pox when a child. Pustules formed on the cornea, which tunic was finally perforated and prolapse of the iris followed. The inflammation eventually involved iris, ciliary body and choroid. After a time the severity of the inflammation subsided, leaving the eye entirely blind and somewhat atrophied. Seven years ago she began to wear an artificial eye over the atrophied bulb, and continued to wear it most of

*Reported in the Medical Record, March 6, 1880.

the time till I saw her. After the artificial eye had been worn for three or four years, the atrophied ball became irritable and painful, and for two years she was unable to wear the artificial eye constantly on account of the discomfort it produced. There was evidently a chronic inflammation of the whole uveal tract, and how much of this was due to wearing the artificial eye I am unable to say. For more than two years she had suffered from attacks of sympathetic irritation of the other eye, such as photophobia, lachrymation, accommodative asthenopia, blurring of vision, etc. These symptoms were aggravated by any persistent attempts to wear the artificial eye, and by reading, etc. The sympathetic disturbance was increasing in severity, and the integrity of the eye was endangered; and as the blind eye was a source of pain and discomfort, it was deemed advisable to operate without further delay. I performed enucleation in the usual manner. After enucleation the ball was opened by an equatorial section dividing it into an anterior and posterior half, as shown at Fig. 1. The retina was detached as is usual when bone is developed within the choroid.

In the posterior half of the globe (Fig. 1 at A.) a thin, compact piece of bone extended

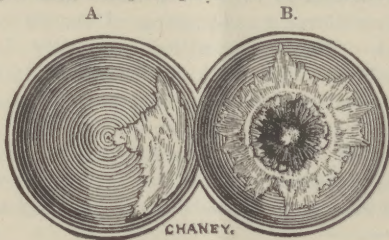


Fig. 1.

forward from the entrance of the optic nerve to the ora serrata. This plate of bone had no connection with that found in the anterior portion of the eye (Fig. 1 at B.). The thin plate of bone seemed to be developed between the retina and choroid, which led me to believe that the bone had developed in the inflammatory exudation poured out from the choroid during the long continued inflammation. The ossification of the ciliary body, however, presents a point of unusual interest. This is shown in Fig. 1 at B. The entire ciliary body was metamorphosed into bone, except at a single small point. Although Haynes Walton states that a case of ossification of the ciliary body had been observed, I am free to say that this instance is, so far as I am aware, the first one in which ossification of the ciliary body has been demonstrated by careful microscopic examination. Fig. 2 at A. shows

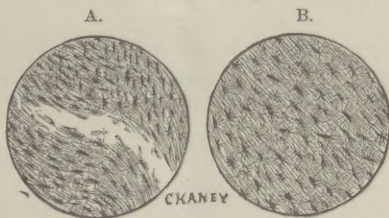


Fig. 2.

the appearance of a microscopic section from bone in the ciliary body, and Fig. 2 at B. shows the appearance of section from bone in choroid. These were prepared and mounted for me by Professor Charles H. Stowell, of the University of Michigan. Professor Stowell made careful microscopic examination of these specimens of bone, and pronounced

them the choicest and rarest he had ever seen. In both sections the lacunæ and canaliculi show very nicely, and passing in a curved line almost through the centre of the section (Fig. 2 at A—bone from ciliary body) can be seen an Haversian canal.

Many other cases of sympathetic disturbance of the eye could be added, but these will suffice to show the general course of such disturbance and the treatment indicated. No doubt that many eyes have been saved by the timely removal of the disturbing fellow eye; but there can also be no doubt that eyes have been removed without sufficient cause to warrant such a procedure. If the offending eye presents a good external appearance, the operation of neurotomy optico-ciliaris is to be preferred to enucleation.

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